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# CPRC



# CCRP

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## TM-04-97

# BODI-CAM™ EVALUATION

Restricted

By: Sergente H. Veilleux  
Inspector B. Herridge

TECHNICAL MEMORANDUM

Submitted by  
Sergente H  l  ne Veilleux                      and              Inspector B Herridge  
Communaut   Urbaine de Montreal              York Regional Police Service

**June, 1996**

NOTE: Further information  
about this report can be  
obtained by calling the  
CPRC information number  
(613) 998-6343

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HER MAJESTY THE QUEEN IN RIGHT OF CANADA (1996)  
as represented by the Solicitor General of Canada.

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SA MAJEST   LA REINE DU CHEF DU CANADA (1996)  
repr  sent   par le Solliciteur g  n  ral du Canada.

## EXECUTIVE SUMMARY

The Bodi-Cam system was developed by KIOSS, based in Richmond Hill, Ontario. The system's development was supported by the National Research Council of Canada's Industrial Research Assistance Program(IRAP) and the Canadian Police Research Centre(CPRC).

The Bodi-Cam system is a tiny wireless camera and transmitter that clips onto the police officers uniform. The video camera's image is transmitted, along with the audio, to another location, up to ¼ of a mile away, where it is recorded on a VCR tape. This allows the officer to play back or review the situation that was captured.

The Bodi-Cam personal video system was evaluated by the Service de Police Communauté Urbaine de Montreal and the York Regional Police Service. The concept was found to be an excellent idea; however, the police evaluators found that the unit required modifications before it could be deployed for use.

## SOMMAIRE

Le système Bodi-Cam a été mis au point par KIOSS, établi à Richmond Hill (Ontario), avec le soutien du Programme d'aide à la recherche industrielle du Conseil national de recherches du Canada et l'appui du Centre canadien de recherches policières.

Il s'agit d'un système camera-émetteur miniaturisé sans fil qui se fixe à l'aide d'une pince à l'uniforme des policiers. L'image vidéo peut être transmise avec le signal audio à une station située jusqu'à 1/4 de mille de distance, où elle sera enregistrée sur magnéto. L'agent est ainsi en mesure d'écouter et de visionner l'enregistrement réalisé.

Le système de vidéo personnel Bodi-Cam a fait l'objet d'essais par le Service de police de la communauté urbaine de Montreal et par le service de police régional de York. Il s'agit d'un excellent concept; toutefois, les évaluateurs de la police ont constaté qu'il faudrait y apporter quelques modifications avant de le mettre en application.

## **INTRODUCTION**

The Bodi-Cam system was developed by the company KIOSS of Richmond Hill, Ontario. The system's development was supported by the National Research Council of Canada's Industrial Research Assistance Program(IRAP) and the Canadian Police Research Centre(CPRC). The Bodi-Cam system is a tiny wireless camera and transmitter that clips onto the police officers uniform. The video camera's image is transmitted, along with the audio, up to ¼ of a mile away, where it is recorded on a VCR tape. This allows the officer to play back or review the incident at that time, or later. The system description and capabilities is described in the company brochure(see appendix A).

The system was offered to CPRC Technology Partners at York Regional Police Service(YRPS) and the service de police communauté urbaine de Montréal(SPCUM). This technical memorandum constitutes their evaluation comments.

## **EVALUATION CRITERIA**

The evaluation criteria was developed with the manufacturer, KIOSS, the Canadian police equipment distributor, R. Nicholls, and CPRC. Equipment specifications pertaining to the camera, transmitter, antennae, batteries, receiver, video recorder, and cables was included(see appendix B).

Two systems were sent out in July, 1996 with the expectation that the units would be returned later in the month. However, some technical problems were encountered with the equipment, and it had to be returned to the manufacturer, causing some minor delays.

## SERVICE DE POLICE COMMUNAUTÉ UBAINE DE MONTREAL EVALUATION

The following has been translated from French to English, (voir original en annexe C). The entire text as received is included.

With reference to the MUC police force's "Bodi-Cam" pilot project, please find attached your filled in evaluation form, as well as the following brief comments.

The camera was presented to police officers and they were briefed on its operation, the officers all felt it would be very useful as an extra work tool and they were quite willing to evaluate it.

We wanted to use the camera in all types of regular patrol activities. Unfortunately, due to the size of the unit and the fact that it must be plugged into a vehicle cigarette lighter, it could not be used on motorcycle and bicycle patrols. Such a camera would be extremely useful in these types of patrols.

During patrol boat use, an overload occurred in the system, causing problems with the recording and the battery charging system. The unit was returned to the company for repair, and it was found that the electrical outlet on the boat supplied more power than a conventional in-car cigarette lighter.

In the testing done by police officers, however, several users were disappointed by a number of shortcomings. Adjustments are needed if the Bodi-Cam is to meet the requirements of police work more effectively, and it is hoped that these adjustments can be made. The adjustments in question are described in detail as follows:

- Durability:** Before the police officers began field testing the equipment, several parts of the equipment had to be modified by the Nicholl's Co. representative, to improve wearability and durability (e.g., plastic mic clip, transmitter belt clip).
- Antennas:** Since they are not permanently attached, there is a risk of them being torn off during an incident.
- Camera:** The aperture angle is too small. The picture is not high enough: if an individual is five feet or less from the camera, the head is outside the frame.
- Sound:** Poor quality.

Carrying case:

No way to stow it securely in the vehicle.

Receiver: Reception was found to be very poor in an urban setting (downtown). The picture breaks up constantly whenever there is an obstacle between the police officer and the vehicle.

Durability of on/off switch:

Seems fragile. Given the importance of this piece of equipment, it would be advisable to reinforce it. Since the indicator light goes out after the equipment has been in use for a certain amount of time, it would be advisable to have visible "on" and "off" markings.

Video recording:

Recording is continuous. When the transmitter button is activated, the picture is recorded. When the transmitter is turned off, the system continues to record, but the picture is blank. The switching system should make it possible to activate the camera and the video recorder at the same time, so as to save on video cassettes and cut down on search time.

It is hoped that our suggestions will be taken into consideration. In our opinion, once these improvements have been made, the Bodi-Cam could be an excellent work tool for police officers in the performance of their everyday duties.

## **YORK REGIONAL POLICE SERVICE EVALUATION**

The system was evaluated in three different areas in the police service - the tactical unit, the patrol division and the identification section. The following comments have been summarized to include input from all the areas.

### Emergency Response Unit

The camera was worn during high risk search warrant training both by officers and "suspects" located inside and outside a two storey wooden structure. The audio worked poorly both inside and outside the building. The picture quality was good outside but went from poor to non-existent once we moved into the building, particularly to the rear of the building away from the receiving unit.

It is felt by the members that the Bodi-Cam could be of use both for tactical and bomb calls with modifications. The on/off switch is not user friendly. It would be better for our purposes to have a switch that clearly indicates, by touch alone, whether the unit is on or off. The transmitting units antennae is poorly attached and will not, and did not, stand up to stress. The overall size of the camera and transmitting unit, for our purposes, could be sacrificed if it means improving video/audio quality.

Although we did not need to recharge the transmitting unit it seems impracticable to be only able to charge it up on a 12 volt system. The size of the camera would offer us such uses as being able to mount it onto a pole to check second storey windows, to mount to a mini robot for investigating scenes both tactical and bomb and for doing reconnaissance on warrant sites. The unit would be interested in trying the Bodi-Cam again if modifications are made.

### Forensic Identification Bureau

The Bodi-Cam was evaluated in three locations: headquarters, four district and at a private residence. The video/receiver unit was installed in the back of the forensic van. During the test at headquarters the van was parked in the underground parking lot. It was found that the video reception varied from good to poor to non-existent. The picture quality suffers when the person wearing the BODI-CAM is moving. Even when standing fairly still the picture would break up and then become non-existent (Blue screen on monitor). Most of the tests were conducted on the ground floor and found that while it did work that there was definite loss of picture quality.

Tests at Four District and at the private residence were fairly consistent with those at headquarters. The test at the private resident was by far the poorest in quality. It is suggested that lighting was probably the cause of this. The camera did not work well in low light conditions. The audio in most situations was poor. It did pick up voices that are in front of the camera far better than that of person wearing it. It also picked up a lot of background noise.

The method of attachment of both the transmitter and camera to the user is very poor. The transmitter fell off the officers belt three times during the testing. When the camera is worn on the shirt pocket there is no way of aligning it with the body. In my case the camera was always pointing to my left and slightly down. There were only two faults that I found with the video recorder. First there is no tape counter so one must pay particular attention to the times and second the tape continues to record even when the camera is off. It may be beneficial to be able to power the video recorder and recharge the camera by means of 115 Volt AC. Given that the nature of forensic identification work involves the accurate documentation of evidence it is hard for me to see where the Bodi-Cam could be of use.

#### Patrol Division

Patrol Officer #1 Comments -

The idea behind the BODI-CAM is good. Perhaps specialized units would be able to make use of it. The unit was (transmitter/camera) unable to fit on my belt, more thought is needed on how to connect the camera to the officer. There was no room for the transmitter and when connected, the antennae was in the way. (The antennae has already been broken prior to my using it and was held on by tape). This caused a poor picture and transmission.

The green light for the on/off switch should stay on when unit is in use and there should be a way to stop the tape when transmitter is turned off: tape would be saved and the positioning of a certain situation would be easily located for viewing.

The equipment case is cumbersome and heavy and there is no room in the rear of the uniform car trunk(perhaps there would be more room when cars are no longer propane). The wide angle lens on the camera is great.

Perhaps, if the antennae was not broken, a fairer assessment would have been obtained.



Patrol Officer #2 Comments -

The camera and mic were very light and compact. The velcro attachment is a good idea but requires a more user friendly adaptor to attach to the person. The carrying case for the entire unit is very durable and is able to store equipment. The case is bulky and would be difficult to transport on a day to day basis. The transmitter could use a better attachment for the belt. It was difficult to secure it while moving around. Overall, an interesting piece of equipment. Do not see how it could be used on a day to day basis for uniform officers. Perhaps specialty units would be able to use the Bodi-Cam during warrant executions.

## S U M M A R Y

The Bodi-Cam personal video system was found to be an excellent idea, However the police evaluators found that the unit needed to be modified before it would become a useful piece of police equipment. Proposed suggested modifications are:

- ▶ Other methods of attachment of the unit to the police officers uniform/belt should be considered -“the velcro attachment is a good idea but requires a more user friendly adaptor to attach to the person.“...” could use a better attachment for the belt.”
- ▶ Antennas attachment should be more durable to avoid the risk of being torn off.
- ▶ The camera aperture angle is too small. The picture is not high enough: if an individual is five feet or less from the camera, the head is outside the frame.
- ▶ Poor sound quality.
- ▶ The in-car carrying case needs to be secured in the vehicle. The case is cumbersome and heavy.
- ▶ The receiver's reception was found to be very poor in an urban setting. The picture broke up constantly whenever there is an obstacle between the police officer and the vehicle.
- ▶ Durability of on/off switch is fragile needs to be more durable and should indicate whether the equipment is on or off.
- ▶ The video recording is continuous. When the transmitter button is activated, the VCR should record. When the transmitter is off the VCR should stop, ie the officer wearing the camera should control the system. Would help if the video tape was ate and time stamped.
- ▶ The system should have the ability to be recharged from both the 110 volt ac and a vehicles 12 volt dc system.
- ▶ The camera did not work well in low light conditions.

The unit was received positively and there appears to be a market for it in the community if the above suggested modifications are implemented. The SPCUM evaluators feels this technology would be useful in bicycle and motorcycle patrols.

The evaluation assessments have been provided to the manufacturer who is in the process of modifying the bodi-cam.

For additional information, call Nancy Teperman at:

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fax (416) 461-5331

or write her at:  
51 Salter Street South,  
Toronto, Ontario, M4M 3K8.

#### ACKNOWLEDGEMENTS

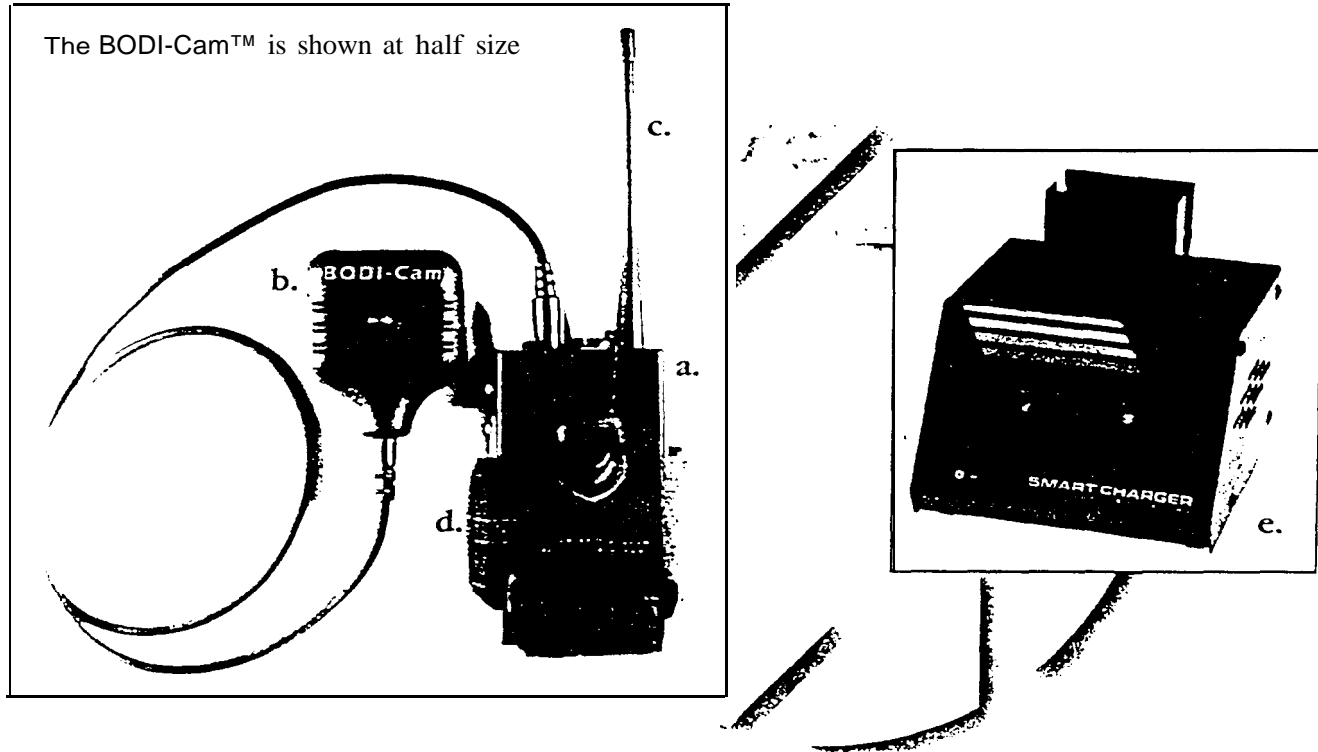
The CPRC thanks, and acknowledges gratefully the assistance provided by Assistant Director J. Dalzell and Sgt. H. Veilleux, SPCUM, Insp. B. Herridge, York Regional Police Service, Ms. N. Teperman, KIOSS, B. Gregory and R. St. Jean, Nicholl's Distributing. Without their assistance this evaluation would not have been possible.

APPENDIX "A"

# BODI-CAM™

## Body Wore Video Transmitter

**The BODI-Cam™ can transmit a real-time video and audio signal, up to 1/4 mile from the receiver.**



**a.** Bodi-Cam Transmitter. **Designed** in conjunction with the Canadian Police Research Centre and the National Research Council. The Bodi-Cam is the most advanced Audio and Video Transmitter available.

**Product No. BC-T1 001**

**b.** Bodi-Cam Camera and umbilical cord. Looks like a standard 2-way radio microphone. Custom housings available on request **Product No. BC-CI201**

**c.** 1/4 Wave Antenna. Soft flexible exterior with a SMA connector

**Product No. BC-A**

**d.** Bodi-Cam Belt Case. Standard police issue. made from highly durable braided nylon. (Custom cases available on request **Product No. BC-M3201**

**e.** Smart Charger. Will Fully charge Bodi-Cam Transmitter in 1 hour.

**Product No. BC-81203**

**f.** Receiver. 5-d x 4-w x 2-h (not shown) Can be linked to VCR, monitor or computer. Can be connected to 12 volt or 120 volt source (Built-in VCR on

**request) Product No. BC-R1001**

# Ki9SS

# BODI-Cam™

## -- Technical Information

### Features

- **Real Time Audio/Video Transmission**
- **Transmits 1/4 Mile**
- **Fully Secure (Video Inversion)**
- **Crystal Clear Images**
- **Man Down Alarm**
- **Micro processor controlled**
- **Duress/Emergency Alarm**
- **Low Battery Indicator**
- **Selectable Channels**
- **Durable High Impact Plastic Casing**

### Technical Information

#### Receiver Specifications

- Patent Pending True Video Diversity
- Video Out: • BNC Type Connector
  - Standard NTSC
  - 1 Volt P/P
- Audio Out: • RCA Type Connector
  - Line Level
- min. 40 db s/n Ratio
- 700 to 800 Mhz
- 12v DC or 120 v AC with adapter
- 80 db Input Sensitivity
- Crystal Phase lock Looped Controlled
- Frequency Agile ( 10 channels )
- Power: • 12vdc @ 300 MA
  - Power on Indicator
  - 2.1 x .9 Type Connector
  - 120 vac to 12 vdc Adapter
- Antenna Input: - single or diver-sir (two)
  - TNC Type Connector (two)
  - 50 OHMS
  - Min. 12 db VSWR
- Dry Contact Output from Man Down/ Panic Alarm: • Isolated
  - 2 a @ 125 vac (max. Switching voltage)
  - Normally Open "or" Normally Closed
  - Panic reset Switch
- Output for Video Recorder

#### Size

Width: 5"  
Depth: 4"  
Height: 2"

#### Transmitter Specifications

- Frequency Modulation Scheme (FM wideband)
- Video Bandwidth 6 Mhz
- Audio Bandwidth 4 Mhz
- 700 to 800 Mhz Operating Range
- Frequency Stability: 500 Hz
- Output Power: 250mw at 50 OHMS
- Power Consumption: 355 Ma/h
- Power Input: 7.2v DC
- 1/4 Wave Antenna
- Antenna Output: SM.4
- Video: NTSC Standard
- Low Light CCD Board Camera with 92" Angle of View
- NiCad Rechargeable Battery. 4 Hours in Continuous use.
- Automatic Man Down Alarm
- Emergency Alert Button
- Operating Temperature: -20°C to 65°C

#### Size

Weight: Less than 1 lbs.  
Width: 2.5"  
Depth: 1.5"  
Height: 4.25"



8) Durability . . . . .

EQUIPMENT ITEM      BODI-CAM.....      Excellent      Very Good      Good      Fair      Poor      Not Applicable

9) Maintenance . . . . .

*Pertaining to Accessories*

10) Battery charger . . . . .

7 1) Video recorder . . . . .

72) Overall rated performance ....

73) Test Conditions \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

14) Additional comments (including any precautions, warnings/cautions)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**CPRC SPECIFIC EVALUATION CRITERIA**

<u>EQUIPMENT ITEM</u>	<u>BODI-CAM</u> .....	Excellent	Very Good	Good	Fair	Poor	Not Applicable
<b>Pertaining to Camera</b>							
1) Camera size	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Camera attachment to body	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Picture quality	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) Picture stability	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) Reaction to light level	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Field of view	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
<b>Pertaining to Transmitter</b>							
7) Cabling of camera to transmitter	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
8) Tx attachment to belt	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) On/Off switch accessibility	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) On/Off switch durability	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
<b>Pertaining to antennae</b>							
11) Is antennae obtrusive . comment below .		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Maybe <input type="checkbox"/>			
12) Magnetic mounts necessary	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Pertaining to batteries</b>							
13) Battery life	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
14) Downtime due to battery charging.	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>
15) Ease of use of battery charger.	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0
<b>Pertaining to Receiver</b>							
16) Receiver range	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0
17) Audio reception	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>
<b>Pertaining to video recorder</b>							
18) Video recorder	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19) Is industrial grade recorder necessary? . .		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Maybe <input type="checkbox"/>			
20) Mechanical function of recorder	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>
21) Any Tape malfunctions? Comment below		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Maybe <input type="checkbox"/>			





**CRITERES GÉNÉREAUX D'ÉVALUATION - BODI-CAM**

		Excellent		Très bon		Bon		Moyen		Mauvais		Ne s'applique pas	
6) Poids / Taille	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
7) Con fort	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
8) Durabilité	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		
9)Entretien	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0		
10) Accessoires (énumérer chaque pièce). ...		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		
11) Rendement général cot.4	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0		
12) Conditions d'Evalua tion	.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>		

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**13) Observations (y compris mesures des précautions, mises en garde, avertissements)**

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CRITERES D'ÉVALUATION PROPRES AU CCRP

<u>PIECE O'EQUIPEMENT</u> BOOI-CAM .....	Excellent	Tres bon	Bon	Passable	Mauvais	Sans objet
<b>Camera</b>						
1) Taille de la camera .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Fixation de la camera au corps .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Qualité de l'image .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) Stabilité de l'image .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) Reaction au niveau de lumière .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Champ de vision .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Émetteur</b>						
7) Câblage caméra-émetteur .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8) Fixation de l'émetteur à la ceinture .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Accès à l'interrupteur On/Off .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70) Durabilité de l'interrupteur On/Off .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>An tennes</b>						
11) Antennes encombrantes ? - Commenter en 27	Oui <input type="checkbox"/>	Non <input type="checkbox"/>	Peut-ê tre <input type="checkbox"/>			
72) Attaches magnétiques nécessaires .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	cl	<input type="checkbox"/>	<input type="checkbox"/>
<b>Ba t teries</b>						
73) Durée de vie des batteries .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14) Inactivité pendant charge des batteries..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15) Facilité d'emploi du chargeur de batteries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Récepteur</b>						
16) Portée du récepteur .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17) Reception audio .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	<input type="checkbox"/>
<b>Magnétoscope</b>						
18) MagnétoSCOPE .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19) MagnétoSCOPE industriel nécessaire? .....	Oui •1	Non <input type="checkbox"/>	Peut-ê tre <input type="checkbox"/>			
20) Fonction mécanique du magnétoSCOPE .....	cl	0	0	El	0	<input type="checkbox"/>
21) Défectuosités de la bande? Commenter en 27	Oui <input type="checkbox"/>	Non <input type="checkbox"/>	Peut-ê tre <input type="checkbox"/>			

<b>PIECE D'ÉQUIPMEENTBODI-CAM</b> .....	<b>Excellent</b>	<b>Très bon</b>	<b>Bon</b>	<b>Passable</b>	<b>Mauvais</b>	<b>Sans objet</b>
<b>Câbles</b>						
22) <i>Branchement des câbles</i> .....	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23) <i>Faisceau de câbles d'alimentation</i> .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Mallette de transport</b>						
24) <i>Taille</i> .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25) <i>Poids</i> .....	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26) <i>Portabilité</i> .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27) <i>Autres commentaires (Veuillez utiliser une autre page au besoin)</i>						

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## APPENDIX "C"



COMMUNAUTE URBAINE DE MONTREAL  
750, RUE BONSECOURS  
MONTREAL  
H2Y 3C7

Le jeudi 19 septembre 1996

Monsieur John Arnold  
Centre Canadien de recherche policière  
National Research Center  
Building M-36, Room # 1122  
OTTAWA (Ont.)  
K1A OR6

Objet: Évaluation de la camera Bodi-Cam

Monsieur,

Pour faire suite au projet pilote de la caméra « Bodi-Cam » au SPCUM, je vous fais parvenir votre formulaire d'évaluation dûment complète ainsi qu'un résumé des commentaires ci-dessous.

Lors de la presentation de la caméra et de l'explication de son fonctionnement, tous les policiers ont trouvé la camera très adéquate comme outil complémentaire à leur travail et ont démontré une grande ouverture pour en effectuer l'évaluation.

Cependant, lors des essais effectués par les policiers plusieurs anomalies ont été constatées par plus d'un utilisateur. Des ajustements sont espérés et nécessaires, afin que « Bodi-Cam » réponde mieux aux exigences du travail policier. Les ajustements souhaités sont décrits de façon détaillée aux endroits prévus à cette fin dans le formulaire d'évaluation.

Nous voulions utiliser la camera dans les divers champs d'activités de la patrouille régulière. Malheureusement, vu la grosseur de l'unité et l'obligation de la brancher continuellement dans l'allume-cigarettes, nous n'avons pu l'utiliser avec les motos ni à la patrouille à bicyclette. La camera serait bien utile dans ce genre de patrouille.

Lors de l'utilisation de la camera avec la patrouille nautique, il s'est produit une surcharge dans le système ce qui a entraîné des défauts au niveau de l'enregistrement et du système de charge. L'unité fut envoyée à la compagnie Kioss afin de corriger la situation. Il semble que la prise du bateau était plus puissante qu'un allume-cigarettes conventionnel.



Monsieur John Arnold  
Centre Canadien de Recherche policière  
Le jeudi 19 septembre 1996

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Nous espérons que nos suggestions apportées dans le présent document seront pris en considération. Nous croyons qu'une fois ces améliorations apportées le Bodi-Cam pourrait être un excellent outil de travail pour les policiers dans leurs activités quotidiennes.



Hélène Veilleux, Sergente  
Conseillère  
Direction de la gendarmerie/partrouille

HV/lr